Illustrated Parts & Service Map

HP Pro 3120 Business PC
Small Form Factor Chassis

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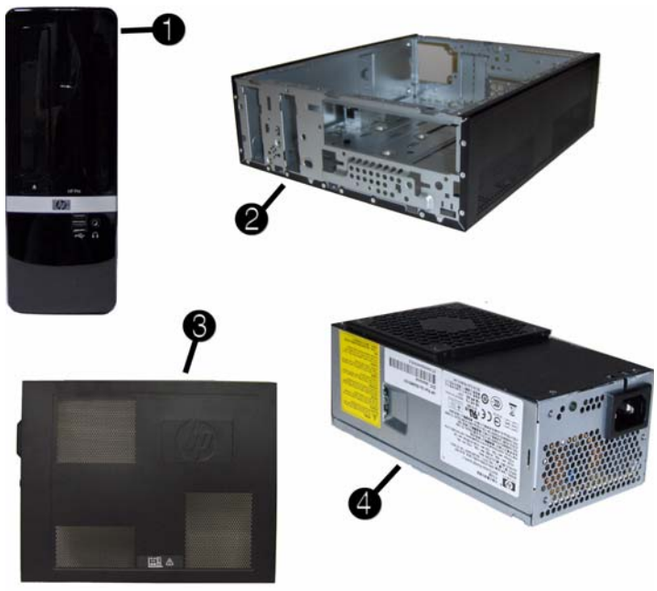
Key Specifications

Processor Type	Intel® Celeron, Intel Celeron Dual Core, Intel Pentium Dual Core, Intel Core™ 2 Duo, Intel Core 2 Quad
RAM Type	DDR3-SDRAM DIMMs, PC2-10600 (1333 MHz) non-ECC
Maximum RAM Supported	8 GB
Expansion Slots	• (1) PCIe-x1 • (1) PCIe-x16
Graphics Adapter	Integrated Intel Graphics Media Accelerator X4500HD
Chipset	Intel G43 Express
Drive Support	• (1) external 5.25-inch • (1) internal 3.5-inch
I/O Interfaces	Front: (2) USB 2.0 ports, microphone, headphone Rear: (4) USB, (1) VGA, (1) DVI, (1) RJ-45 Ethernet, (1) SPDIF out, (1) audio in, (1) 5.1/7.1 channel audio out, (1) microphone
Operating Systems	• Windows 7 • Windows Vista • Windows XP • SuSE Linux Enterprise Desktop 11 • FreeDOS

Spare Parts



System Unit

1	Front bezel	617034-001
2	Chassis	not spared
3	Access panel	617035-001
4	Power supply, 220W, PFC	617033-001

Cables

1	Front I/O assembly	617074-001
2	Power switch/LED assembly	617036-001
*	SATA optical drive cable with latch, 11 inch (280 mm)	617037-001
*	SATA hard drive cable with latch, 6.5 inch (165 mm)	448670-001

**Not shown*

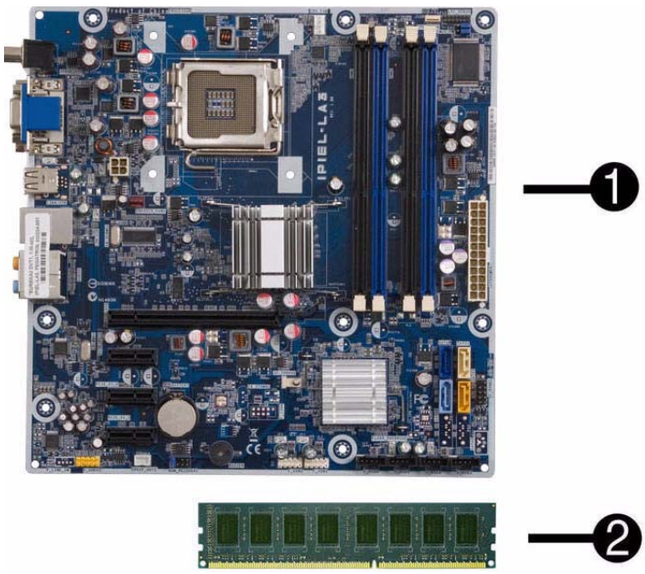
Keyboards (not illustrated)

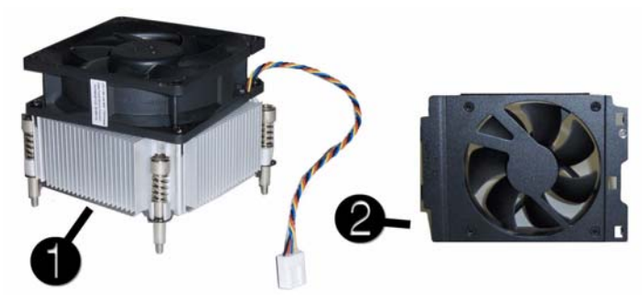
USB, Standard **USB SmartCard** **USB, low cost**		**537746-xxx** **537747-xxx** **537924-xxx**	
Arabic[c]	-171	Hungarian	-211
Belgian	-181	International English	-L31
BHCSY[a]	-BL1	Italian	-061
BHCSY[b]	-B41	Norwegian	-091
Bulgaria[b]	-261	Portuguese	-131
Czech[b]	-221	Romanian[b]	-271
Danish[b]	-081	Russian[d]	-251
Finnish	-351	Slovakian	-231
French	-051	Spanish	-071
French Arabic	-DE1	Swedish	-101
German	-041	Swiss	-111
Greek	-151	Turkish	-141
Hebrew	-BB1	U.K.	-031

[a] 537747-xxx only
[b] not for 537747-xxx
[c] 537924-xxx only
[d] not for 537746-xxx

Mass Storage Devices (not illustrated)

DVD±RW and CD-RW SuperMulti DL Combo Drive with LightScribe	581600-001
2 TB hard drive, 7200 rpm	616608-001
2 TB hard drive, 5400 rpm	613210-001
1.5 TB hard drive, 7200 rpm	613209-001
1.5 TB hard drive, 5400 rpm	613203-001
1 TB hard drive, 5400 rpm	613200-001
750 GB hard drive, 7200 rpm	613205-001
640 GB hard drive, 7200 rpm	613204-001
500 GB hard drive, 5400 rpm	586720-001
320 GB hard drive, 7200 rpm	613207-001
320 GB hard drive, 5400 rpm	586969-001
250 GB hard drive, 5400 rpm	586719-001
160 GB hard drive, 5400 rpm	419102-001
Hard drive conversion bracket	397117-001





Standard and Optional Boards

1	System board, GL8 (includes thermal grease, alcohol pad, CPU socket cover, and bumper)	615594-001
Memory modules (PC3-10600, CL9)		
2	1 GB	576109-001
*	2 GB	576110-001
*	4 GB	585157-001
Other boards		
*	SuperSpeed USB 3.0 PCIe x1 card, includes low profile bracket	608151-001
*	Agere International 56K LSI v92 modem, includes bracket	490689-001
*	ATI Radeon HD4350 (RV710D2) PCIe x16 graphics card, 512 MB, includes low profile bracket	578368-001
*	ATI Radeon HD5450 PCIe graphics card, 1 GB, includes low profile bracket	617044-001
*	ATI Radeon HD5450 PCIe graphics card, 512 MB, low profile	614506-001
*	GeForce GT320 1-GB PCIe graphics card, includes low profile bracket	617046-001
*	GeForce GT315 512-MB PCIe graphics card, low profile	614508-001
*	GeForce GT220 1.0-GB PCIe graphics card, includes low profile bracket	617045-001
*	GeForce GT210 512-MB PCIe graphics card, includes low profile bracket	591180-001
*	802.11b/g/n WLAN PCIe adapter, includes antenna	617048-001
*	Intel Gigabit NIC, includes bracket	490367-001
*	Bluetooth module	617047-001
Intel Celeron Processors with alcohol pad and thermal grease:		
E3400, 1-MB cache, 2.60 GHz		602072-001
E3300, 1-MB cache, 2.50 GHz		585886-001
450, 512-KB cache, 2.20 GHz		508256-001
Intel Core2 Quad Processors with alcohol pad and thermal grease:		
Q9500, 12-MB cache, 2.83 GHz		602073-001
Q8400, 4-MB cache, 2.66 GHz		573955-001
Q8300, 4-MB cache, 2.50 GHz		586746-001 516901-001
Intel Core2 Duo Processors with alcohol pad and thermal grease:		
E8500, 6-MB cache, 3.16 GHz		466170-001
E7600, 3-MB cache, 3.06 GHz		573954-001
E7500, 3-MB cache, 2.93 GHz		531988-001
Intel Pentium Processors with alcohol pad and thermal grease:		
G6950, 3-MB cache, 3.20 GHz		600128-001
E6700, 2-MB cache, 3.20 GHz		617840-001
E6600, 2-MB cache, 3.06 GHz		602070-001
E6500, 2-MB cache, 2.93 GHz		586748-001
E5500, 2-MB cache, 2.80 GHz		613035-001
E5400, 2-MB cache, 2.70 GHz		586743-001

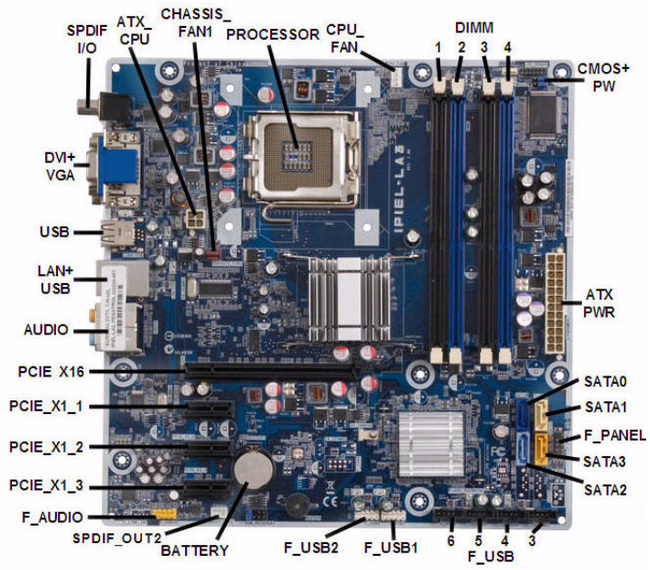
** Not shown*

Miscellaneous Parts

1	Heat sink, Intel class F for use with Intel Core2 Duo Qxxxx processors: (includes replacement thermal material)	617040-001
*	Heat sink, Intel class H for use Intel Core2 Quad Qxxxx, Celeron, Core2 Exxxx, and Pentium Exxxx processors (includes replacement thermal material)	617042-001
2	Chassis fan	617073-001
*	PCI slot cover	617075-001
*	Mouse, optical, Jack Black	537749-001
*	Mouse, laser, Jack Black	570580-001
*	Mouse, optical, Portia	596410-001
*	Mouse, wireless (includes dongle)	596412-001
*	Antenna, dual band dipole, 802.11 a/b/g/n	583345-001

**Not shown*

System Board



System Board Connectors and Jumpers (component location may vary)

SPDIF I/O	Digital line-in/line-out audio connector	SATA2	2nd SATA optical drive
ATX_CPU	CPU power connector	F_USB3-6	USB connectors
CHASSIS_FAN1	System fan connector	FRNT_USB1	Media card reader connector
PROCESSOR	Processor slot	FRNT_USB2	Front I/O panel USB connector
CPU_FAN	CPU/heat sink fan connector	BATTERY	RTC battery socket
DIMM1	Memory socket 1	SPDIF_OUT2	SPDIF internal connector
DIMM2	Memory socket 2	F_AUDIO	Front panel audio connector
DIMM3	Memory socket 3	PCIE_X1_3	PCI Express x1 slot 3
DIMM4	Memory socket 4	PCIE_X1_2	PCI Express x1 slot 2
CMOS+PW	CMOS jumper	PCIE_X1_1	PCI Express x1 slot 1
ATXPWR	Main power connector	PCIEX16	PCIe X16 connector
SATA0	1st SATA optical drive	AUDIO	Double stack audio connector
SATA1	1st SATA hard drive	LAN+USB	Stacked RJ-45/USB connectors
F_PANEL	Power switch connector	USB	USB connector
SATA3	2nd SATA hard drive	DVI+VGA	Stacked DVI/VGA connector

Computer Setup

Basic system information regarding system information, setup, power management, hardware, and passwords is maintained in the Setup Utility held in the system ROM. The Setup Utility is accessed by pressing the F10 key when prompted (on screen) to do so during the boot sequence. If the screen prompt opportunity is missed, a restart will be necessary...

Computer Setup Menu

Heading	Option / Description	
Main	System Time	Allows you to set system time.
	System Date	Allows you to set system date.
	System IDs	Allows you to view or change the following by pressing **Enter**: Product name, serial number, UUID, SKU, Family name (view only), Feature byte, Build ID.
	Language	Allows you to select the language.
	Floppy Diskette A	Allows you to set to Disabled, 1.44 MB 3.5", Not Installed.
	1st Drive 2nd Drive 3rd Drive 4th Drive	Allow you to: Enable/disable port configuration, view capacity, transfer mode. Also allows you to run HDD self-test for selected channel: SMART status check, SMART short self test, SMART extended self test.
	System Information	Allows you to view installed memory, memory banks 1-4, BIOS revision, core version.
Advanced	CPU Type	View only.
	CPU Speed	View only.
	Cache RAM	View only.
	Cache RAM (L2)	View only.
	Cache RAM (L3)	View only.
	Primary Video Adapter	Allows you to select boot display device when more than 2 video options are offered by system: Integrated (Onboard), PCI-E.
	USB Ports	Allows you to disable/enable individual USB ports.
	SATA Controller	Allows you to disable/enable the SATA controller.
	SATA Controller Mode	If SATA Controller is enabled, allows you to set the mode to: IDE, AHCI
	Onboard Audio	Allows you to set the onboard audio to: Enabled, Disabled, Auto.
	Onboard LAN	Allows you to disable/enable onboard LAN controller.
	Onboard LAN Boot ROM	Disable/enable the boot ROM of the onboard LAN chip.
	Change Supervisor Password	Allows you to establish, disable, or change the supervisor password.
	Change User Password	Allows you to establish, disable, or change the user password. Only displays in a Supervisor password is set.
	Supervisor Password	Allows you to view the supervisor password.
	User Password	Allows you to view the user password. Only displays in a Supervisor password is set.
Power	After AC Power Failure	Allows you to select system restart behavior after power loss: Stay off, Power on, Auto.
	XD (Execute Disable)	Allows you to disable/enable the processor's XD feature. Default is enabled.
	Virtualization Technology	Allows you to enable/disable the processor's Virtualization Technology feature. Default is disabled.
	WOL in S5	Disables/enables limited Wake on LAN from S5. Note that the computer can only wake from S5 during a normal shutdown event. Default is disabled.
Boot	Boot-time Diagnostic Screen	Disable/enable POST diagnostic messages display during boot.
	(Boot Device Priority) 1st Boot Device, 2nd Boot Device, 3rd Boot Device, 4th Boot Device	Allows you to set device group boot priority: CD-ROM group, Hard drive group, Floppy group, Network boot group. MS-DOS drive lettering assignments maybe apply after a non-MS-DOS operating system has started.
	Floppy Group Boot Priority	Specifies boot device priority within removable devices. NOTE: This computer does not support floppy drives.
	CD-ROM Boot Priority	Specifies boot device priority within CD/DVD drives.
	Hard Drive Boot Priority	Specifies boot device priority within hard drives.
	Network Group Boot Priority	Specifies boot device priority within bootable network devices.
Exit	Exit Saving Changes	Press **Enter** to exit saving changes.
	Exit Discarding Changes	Press **Enter** to exit discarding changes.
	Load Setup Defaults	Press **Enter** to load setup defaults.
	Discard Changes	Press **Enter** to discard changes.
	Save Changes	Press **Enter** to save changes.

POST Error Messages

- Default BIOS settings have been loaded due to BIOS update or checksum issue.
  Press <F10> to enter Setup. Otherwise, allow the PC to continue.
- ERROR: System Fan Has Failed.
  Service PC to prevent damage to the system.
  Press <F2> to continue
- ERROR: System Fan Has Failed.
  Service PC to prevent damage to the system.
  Press <F2> to continue
- ERROR: Unsupported CPU installed.
  PC will automatically power down in a few seconds.
- The machine cover has been removed since last system startup.
  Please ensure that any system access was authorized.
  Press <F2> to continue.
- (HDD information displayed here): Hard disk failure is imminent. Please back up your hard disk and have it replaced!
  Press <F10> for Setup, <F2> to Continue
- Warning: Changing setup options while resuming from Hibernate may cause your system to fail to resume.

POST Audible Codes

Beeps	Meaning	Recommended Action
1 short beep and 1 long beep followed by a three second pause	Bad memory or memory configuration error.	Check that the memory modules have been installed correctly and that proper modules are used.
2 short beeps and 1 long beep followed by a three second pause	No graphics card installed or graphics card initialization failed.	For systems with a graphics card: 1. Reseat the graphics card. Power on the system. 2. Replace the graphics card. 3. Replace the system board. For systems with integrated graphics, replace the system board.
3 short beeps and 1 long beep followed by a three second pause	CPU configuration error or invalid CPU detected before graphics card initialized.	1. Upgrade the BIOS to proper version. 2. Change the processor.
1 short beep followed by a one second pause	No optical drive found.	1. Check cable connections. 2. Run the Computer Setup utility and ensure the device port is enabled.
2 short beeps followed by a three second pause	No CD found.	1. Check the type of drive that you are using and use the correct media type. 2. Replace the CD with a new one.
3 short beeps followed by a three second pause	Flashing not ready (missing utility or BIOS image file, etc.)	Upgrade the BIOS to proper version.
4 short beeps followed by a three second pause	Flashing operation has failed (checksum error, corrupted image, etc.)	1. Verify the correct ROM. 2. Flash the ROM if needed. 3. If an expansion board was recently added, remove it to see if the problem remains. 4. Clear CMOS. 5. If the message disappears, there may be a problem with the expansion card. 6. Replace the system board.
5 short beeps followed by a three second pause	BIOS recovery was successful	No action required.